The Connector

Bringing you quarterly updates from Metro Water Recovery

Issue 6 January 5, 2022

What's Inside this Issue?

Happy New Year! Metro is proud of how we worked together to serve our communities, even though 2021 was not quite what we expected. Thank you for being great partners!

In this Issue:

Kim Cowan, NTP Director of Operations and Maintenance, provides a tour to the Board of Directors

Metro Rules and Regulations Update

Section 6.0 Approval in Progress

On December 21, 2021, the Board of Directors adopted amendments to Section 6.0 of the Metro Water Recovery *Rules and Regulations Governing Operation, Use, and Services of the System* (Rules and Regulations). The updates are not expected to impact Metro's Connectors.

Section 6.0 of the Rules and Regulations is specific to Metro's Industrial Pretreatment Program, which regulates commercial and industrial discharges to Metro. These updates are required to meet the Colorado Discharge Permit System (CDPS) wastewater discharge permits issued to Metro by the Colorado Department of Public Health and Environment (CDPHE) for both the Robert W. Hite Treatment Facility (RWHTF) and Northern Treatment Plant (NTP).

The updated Rules and Regulations are currently in the approval process with EPA, which determines the effective date. Metro will notify Connectors when the new Rules and Regulations are approved and posted to the website.

The updates to the Rules and Regulations include:

- Revisions of Section 6.18.1 as the result of a Metro's Limitations (local limits) evaluation submission that was required to U.S. Environmental Protection Agency (EPA) prior to July 1, 2020.
- Addition of provisions to address the recently promulgated Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) regulations.
- Clarification of existing language; better alignment with current Metro implementation practices, including full implementation of the pretreatment program by Metro throughout the service area; and revisions to existing language to address comments received from the EPA Region 8 Pretreatment Coordinator.

Additional details are available in Resolution 1221-B9.d in the December 21, 2021 Board meeting minutes on the website. For questions, contact Ridge Dorsey at rdorsey@MetroWaterRecovery.com.

2022 Legislative Session

Policy Preview

The 2022 legislative session is expected to begin on January 12 and should adjourn on May 11, assuming any COVID-19 disruptions are avoided.

All members of the Colorado State House of Representatives and one-third of the State Senate will be up for re-election in November 2022. These November elections cast a long shadow and will impact what happens under the Gold Dome during the 2022 session.

Some anticipated key policy conversations for the 2022 legislative session include:

- Lots of work to address the pandemic and all things COVID-19 related.
- Environmental policy reforms with a continued focus on air quality and greenhouse gas reductions.
- Allowance for public employees to engage in collective bargaining.
- Focus on large-scale systemic budget issues including one-time payments to Colorado Public Employees' Retirement Association (PERA) and the State Unemployment Insurance Program.

Metro is highly engaged with legislators on these topics. If there is a question you have or a bill you have questions about, contact Erin Bertoli at ebertoli@MetroWaterRecovery.com.

Colorado State Capitol building, courtesy of Denverite.com

Introducing Erin Bertoli

Governmental Affairs Liaison

Metro is fortunate to be starting the upcoming legislative session with a new Governmental Affairs Liaison, Erin Bertoli. Erin is replacing Brandy DeLange, who relocated to the Pacific Northwest.

Erin Bertoli is an experienced government affairs and public policy professional. She joins Metro Water Recovery with over 20 years of experience in public policy. Erin has led state policy change to increase physical activity, combat nicotine addiction, and improve emergency response and treatment for cardiac events. Most recently, Erin was the program director for the Public Policy and System Change Network at the Colorado School of Public Health. While in this position she led the effort to pass over 40 local policies. In her free time, she enjoys spending time with her family and recreating in the mountains.

Erin will work with elected officials at the state and local levels in support of Metro Water Recovery's legislative and regulatory priorities. In addition to Erin, Metro contracts with Brownstein to assist with local and state lobbying activities. At the national level, the National Association of Clean Water Agencies (NACWA) is Metro's lobbyist and assists with specific issues unique to the West.

Website Highlight

About Us – Board of Directors, Strategic Plan, Reports, History, Awards

The new Metro Water Recovery website was introduced on September 1, 2021 and continues to improve based on feedback from our stakeholders. Because it is new, we would like to take the opportunity to share some features that may be useful to our Connectors. This quarter we will focus on the About Us page, which includes information about Metro's Board of Directors and the associated Board meeting agendas and minutes.

The **About Us** landing page showcases general Metro information, as briefly described below.

Leadership Page
Shares the list of Member Municipalities and their associated Board members. For Board questions, contact Ruth Kedzior at rkedzior@MetroWaterRecovery.com.

Agendas & Minutes

Makes available the current Board and Committee meeting agendas and Board of Director meeting minutes and includes a link to the meeting schedule. For Board questions, contact Ruth Kedzior.

Budgets & Reports

Stores three years of financial and annual reports. For financial report questions, contact Molly Kostelecky at mkostelecky@MetroWaterRecovery.com. For annual report questions, contact Dawn Ambrosio at dambrosio@MetroWaterRecovery.com.

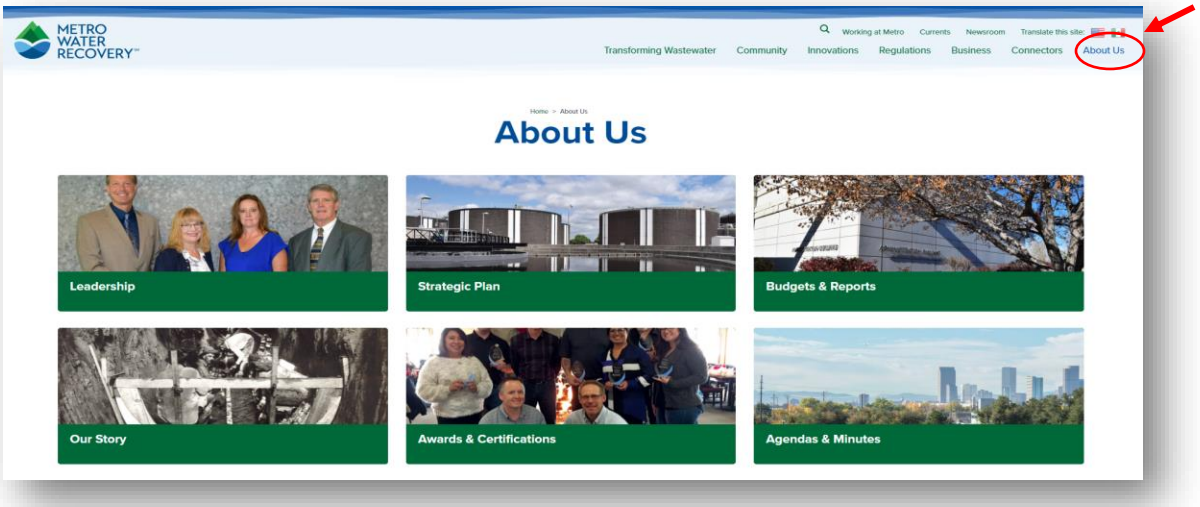
Strategic Plan

Provides a link to the most recent Metro Strategic Plan. For Strategic Plan questions, contact Dawn Ambrosio.

Our Story

Offers a visual history of Metro Water Recovery, starting in 1964. For historical records, contact Records Management at crecords@MetroWaterRecovery.com.

Awards and Certificates
Showcases two years of awards that Metro has received. For questions about the awards, contact Kelley Merritt at kmerritt@MetroWaterRecovery.com.



Connector Education Opportunity

Annual Charge Process Webinar

Multiple Metro Connectors and Directors have requested more information on how Metro Water Recovery's Annual Charge process works. Metro will be hosting two webinars via Microsoft Teams to share a high-level overview and offer an opportunity for questions. Both sessions will be held for one hour and will share the same information. Below are the dates and times in which the webinar will be offered.

Annual Charge Webinar

February 3, 2022, at 11:00 am

AND

March 10, 2022, at 2:00 pm

If you plan to attend, RSVP to Dawn Ambrosio at dambrosio@MetroWaterRecovery.com. Dawn will provide an invitation with the agenda and meeting link for the specific date of your request.

Important Dates to Remember

January 15, 2022	Q4 2021 Sewer Connection Charges due
February 3, 2022	Annual Charge Webinar
March 10, 2022	Annual Charge Webinar
March 15, 2022	Q1 2022 Annual Charges Due
March 2022	2021 Annual Summaries delivered to connectors
April 15, 2022	Q1 2022 Sewer Connection Charges Due

Currents Website Blog

Metro's new website has a blog that features everyday work and achievements. Check out the story on Metro's Environmental Sampling team. They work day and night to ensure sampling systems are maintained, including those that feed that calculations for Connector Annual Charges.

Metro's Environmental Sampling team includes Patrick Maes, Anthony Pino, Craig Thomas, Natalie Lundell, Darnell Tullock, Gabriel Sisneros, and Jay Halliwell (left to right).

Emerging Issues

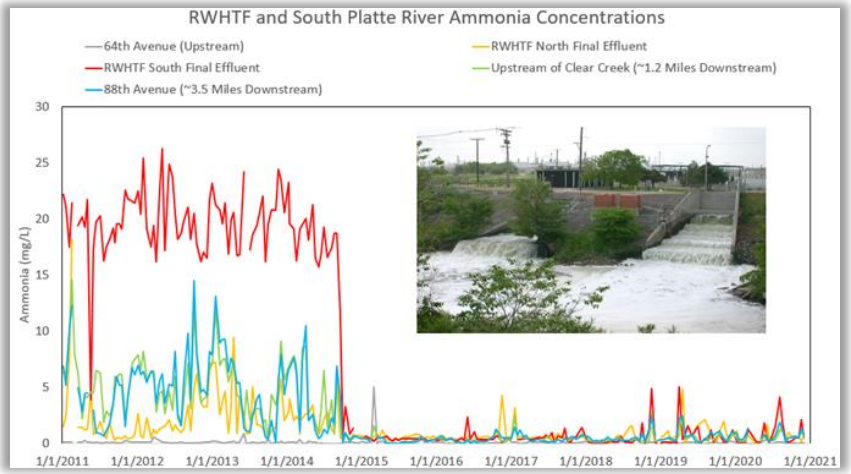
Reviewing issues which impact resource recovery

Issue 3, November 2021

Treatment Plant Upgrades Reduce Effluent Ammonia Concentrations and Improve Aquatic Life in the South Platte River

Treatment Plant Upgrades to Meet More Stringent Ammonia Standards

In the fall of 2014, construction was completed on the South Secondary Improvements Project (PAR 1085) at the Robert W. Hite Treatment Facility (RWHTF). This project involved upgrading the aging 1960's-era facility by converting from pure-oxygen treatment to biological nutrient removal to meet more stringent effluent requirements for nitrogen and ammonia removal, as required by Metro Water Recovery's 2015 discharge permit. Following completion of PAR 1085, Metro staff observed an immediate and drastic reduction in South Final Effluent (Process Control) ammonia concentrations. As a result of these treatment plant upgrades, staff also documented a significant reduction of ammonia concentrations in the downstream river monitoring locations.



Time series graph showing reduction of ammonia concentrations in the RWHTF effluent and downstream river monitoring locations.

Biological Monitoring Shows Evidence of Aquatic Life Improvements

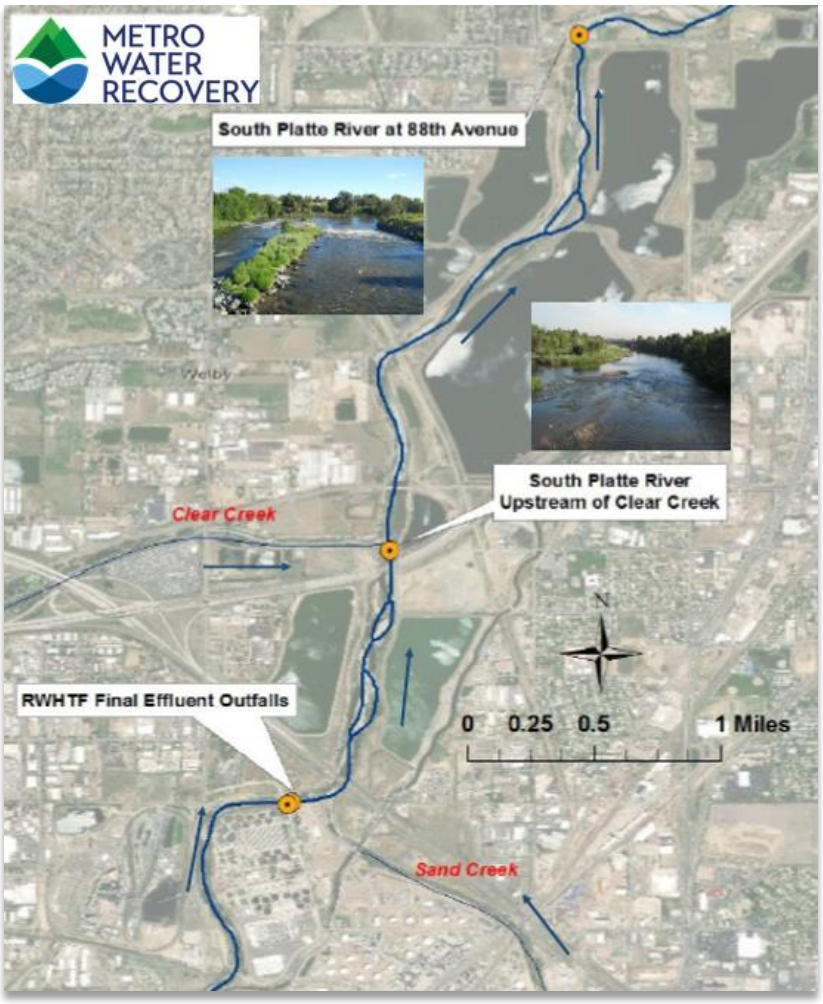
As part of Metro Water Recovery's biological monitoring program, staff collects macroinvertebrate samples every fall to document changes in aquatic life health. Benthic macroinvertebrates are organisms which lack a backbone and are visible without the aid of a microscope. Aquatic macroinvertebrates are good indicators for overall stream health as they spend all or most of their lives in the stream, are easy to collect, and the different species have different tolerances to pollution. These aquatic macroinvertebrates typically live under and on rocks, leaf litter, woody debris, aquatic plants, and in the sediment of the stream bottom. They are a vital part of the food web and play an essential role in the aquatic ecosystem. They are also affected by chemical, physical, and biological conditions of the stream and as their limited mobility does not allow them to escape pollution, they therefore serve as excellent indicators of both long and short-term pollution events. Rivers in healthy biological condition tend to support a wide variety and high number of macroinvertebrate taxa, including many which are intolerant of pollution. Conversely, waterbodies containing only pollution-tolerant taxa or very little diversity, or abundance may indicate a less healthy waterbody.

The macroinvertebrate community immediately downstream of the RWTHF outfalls has improved in recent years, most notably since 2014 when the instream ammonia concentrations were significantly reduced (elevated ammonia can be toxic to aquatic life).

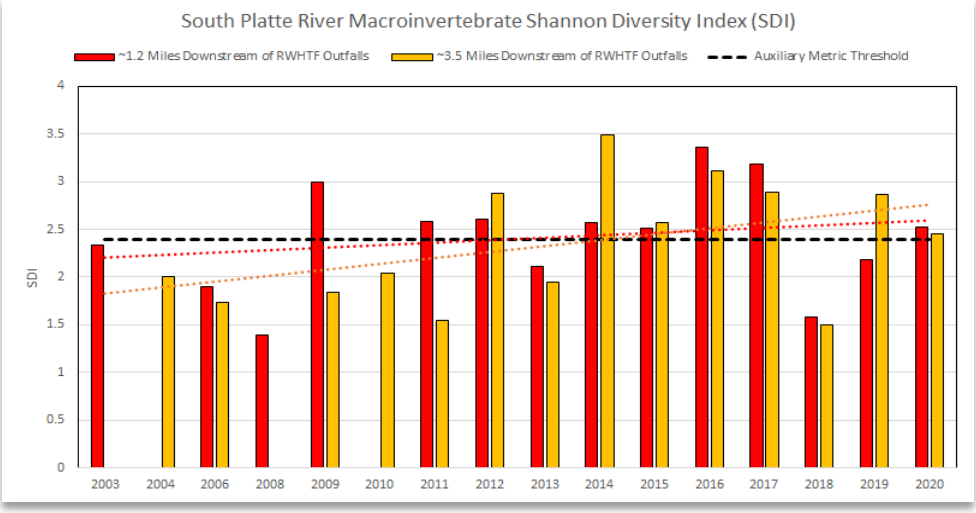
Jordan Parman (Senior Water Quality Scientist) collecting a macroinvertebrate sample from the South Platte River upstream of 120th Avenue using a kick net (left). The macroinvertebrate community downstream of the RWHTF outfalls has shifted to more pollution-sensitive taxa, including the caddisflies (right).

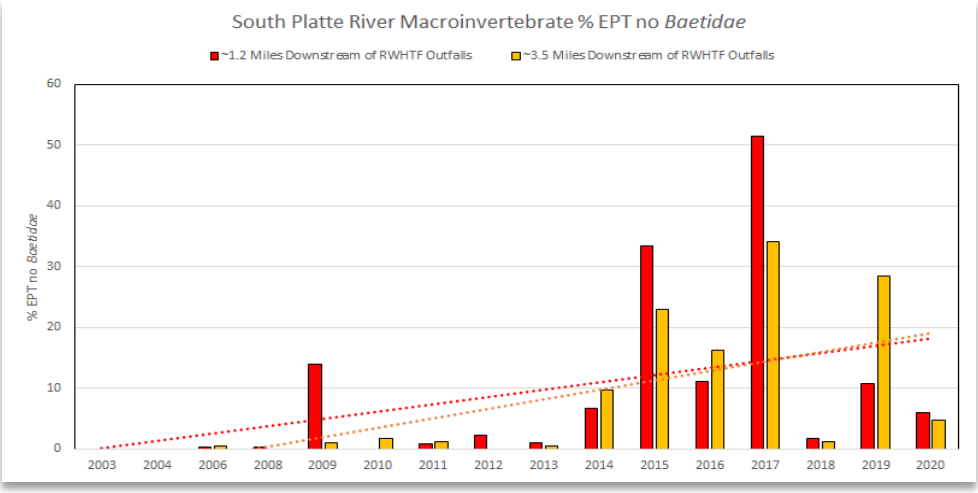
For example, the Shannon Diversity Index (SDI) is a commonly used diversity index which accounts for both taxa richness and abundance. There have been increases in the SDI in recent years at the two closest downstream monitoring sites (~1.2 and ~3.5 miles downstream of the RWHTF outfalls). For reference, the Colorado Water Quality Control Division (WQCC) uses the SDI as an auxiliary threshold for assessing aquatic life health. Any score above 2.4 is considered to be attaining the aquatic life criteria. These sites improved from rarely attaining this SDI auxiliary threshold to meeting and frequently surpassing it in the most recent seven years, with the exception of 2018.

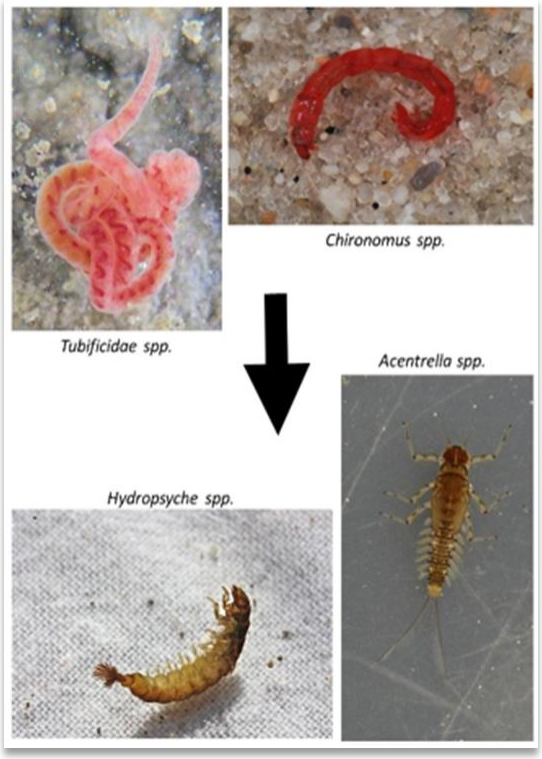
The relative abundance of mayfly (Ephemeroptera), stonefly (Plecoptera), and caddisfly (Trichoptera) – abbreviated as EPT – in a sample is a common metric for determining the health of a macroinvertebrate community. While stoneflies are not expected to be found in large, warm-water rivers such as the South Platte River, the metric is still useful and there has been a recent increase in this metric at sites downstream of RWHTF. In general, the EPT families are more pollution-sensitive, so the recent increase in the percent of EPT suggests an improvement in water quality, likely due to the instream ammonia concentration reductions.



Location map of biological monitoring sites (above).







Above: The macroinvertebrate community has shifted from pollution-tolerant taxa such as aquatic worms (Tubificidae spp.) and nonbiting midges (Chironomus spp.) to more sensitive taxa such as caddisflies (Hydropsyche spp.) and mayflies (Acentrella spp.). Below: Adult caddisfly and adult mayfly.

Conclusions and Future Monitoring

The overall improvements in the downstream macroinvertebrate community demonstrate treatment plant upgrades can have a direct and tangible benefit on the South Platte River aquatic ecosystem. This success story also highlights the importance of long-term water quality and biological monitoring. Without a solid, scientifically-defensible dataset which spans decades, it would not have been possible to document and quantify these improvements. Metro Water Recovery's Water Quality Division will continue to collect this important information regarding river health and hopes to find further evidence of improvements to the South Platte River following future treatment plant upgrades, including the recent initiation of full-scale biological phosphorus removal at RWHTF.

For more information about Emerging Issues topics at Metro Water Recovery, please contact Jennifer Robinett, Director of Environmental Services, at jrobinett@mwrd.dst.co.us.